RUST GEOTECH INC.

Spectral Gamma-Ray Borehole
Log Data Report

Borehole 51-05-03

Log Event A

Borehole Information

Farm : TX	**Tank :** TX-105	**Site Number :** 299-W15-174
N-Coord : 41,757	**W-Coord :** 75,702	**TOC Elevation :** 679.02
Water Level, ft :	**Date Drilled :** 1/31/1974	

Casing Record

Type : Steel-welded	Thickness : 0.280	ID, in. : 6
Top Depth, ft. : 0	Bottom Depth, ft. : 113	

Borehole Notes:
According to the driller's records, this borehole was not perforated or grouted. The top of the casing is located on a hill that is approximately 10 ft higher than the average tank farm surface. The casing thickness is presumed to be 0.280 in., on the basis of published thickness for schedule-40, 6-in. steel tubing.

Equipment Information

Logging System : 2	**Detector Type :** HPGe	**Detector Efficiency:** 35.0 %
Calibration Date : 11/1995	**Calibration Reference :** GJPO-HAN-3	**Logging Procedure :** P-GJPO-1783

Log Run Information

Log Run Number : 1	**Log Run Date :** 4/3/1996	**Logging Engineer:** Alan Pearson
Start Depth, ft.: 113.0	**Counting Time, sec.:** 100	**L/R :** L **Shield :** N
Finish Depth, ft. : 65.0	**MSA Interval, ft. :** 0.5	**Log Speed, ft/min.:** n/a

Log Run Number : 2	**Log Run Date :** 4/4/1996	**Logging Engineer:** Alan Pearson
Start Depth, ft.: 66.0	**Counting Time, sec.:** 100	**L/R :** L **Shield :** N
Finish Depth, ft. : 0.0	**MSA Interval, ft. :** 0.5	**Log Speed, ft/min.:** n/a

Borehole 51-05-03

Log Event A

Analysis Information

Analyst : S.D. Barry

Data Processing Reference : P-GJPO-1787 Analysis Date : 9/30/1996

Analysis Notes :

This borehole was logged in two log runs. The pre- and post-survey field verification spectra met the acceptance criteria established for the peak shape and detector efficiency, confirming that the SGLS system was operating within specifications. The energy calibration and peak-shape calibration from these spectra were used to establish the channel-to-energy parameters used in processing the spectra acquired during the logging operation.

Casing-correction factors for a 0.280-in.-thick steel casing were applied during analysis.

Cs-137, processed U-238, and processed U-235 were the man-made radionuclides identified in this borehole. The presence of Cs-137 was measured almost continuously from the ground surface to about 43.5 ft and at the bottom of the borehole. The maximum Cs-137 concentration was about 5.4 pCi/g at 3 ft. Concentrations in the remainder of the borehole were less than 5 pCi/g.

Processed U-238 and U-235 are indicated at concentrations of up to about 398 and 18.5 pCi/g, respectively. Processed U-238 and U-235 were measured between 61 and 77 ft in depth.

Additional information and interpretations of log data are included in the main body of the Tank Summary Data Reports for tanks TX-101 and TX-105.

Log Plot Notes:

Separate log plots show the man-made (e.g., Cs-137) and the naturally occurring radionuclides (e.g., K-40, U-238, and Th-232). The natural radionuclides can be used for lithology interpretations. The headings of the plots identify the specific gamma rays used to calculate the concentrations.

A combination plot includes both the man-made and natural radionuclides, in addition to the total gamma derived from the spectral data and the Tank Farms gross gamma log. The gross gamma plot displays the latest available digital data. No attempt has been made to adjust the depths of the gross gamma logs to coincide with the SGLS data.

Uncertainty bars on the plots show the statistical uncertainties for the measurements as 95-percent confidence intervals. Open circles on the plots give the MDL. The MDL of a radionuclide represents the lowest concentration at which positive identification of a gamma-ray peak is statistically defensible.